

CANCER ORGANIZATIONS IN FRANCE, BELGIUM, ENGLAND, GERMANY AND SWEDEN*

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The necessity for an intensified attack upon the problems arising from cancer in man becomes daily more apparent. With more accurate vital statistics, with the more refined methods of diagnosis, and with the drop in the mortality rate as a result of the control of the diseases incidental to infancy and early adult life, the morbidity and mortality from cancer, which strikes at that time of life when a person's experience has matured but when his work is only half done, are becoming appalling. The economic loss is secondary only to the suffering entailed in the individual and in those about him.

In former years, when the importance of this problem was less apparent, the individual person with this disease was carried in the general load of medical and surgical work, with the result that the attack was desultory and ineffectual, and general opinion was extremely pessimistic as to the outcome in the individual case. However, in the last decade everywhere throughout the civilized world, the investigation of cancer has been broadened and intensified, and the plan of attack upon its occurrence in man has gradually developed. The antituberculosis crusade of the previous generation has in many ways served as a model and an inspiration, for, though the problems differ in some respects, they are common in that the attack must be concerted, and organized and centered about early diagnosis, the provision of adequate facilities, and the development of specialized professional care.

That this is taking place in different ways in various countries, as a result of the national temperaments and the political organizations, is well. In the United States these factors have led to spasmodic and uncoordinated efforts which have but served to bring out the difficulties of the problem. It is necessary that we understand what is being done elsewhere and not rest satisfied in a chauvinistic self-content. For this reason the following account of what is being done in Europe is of importance.

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During the latter part of the nineteenth century, armed with the principles of asepsis and the knowledge of anesthesia, surgery promised great advances in the control of cancer. Some of these were fulfilled. After the advent of Roentgen ray, and radium therapy, unsolved problems were attacked with renewed vigor. Again, the success was only partial. Going hand in hand with the above, the studies of pathologists and of clinicians added much to the knowledge of neoplastic diseases.

The beginning of the present century witnessed the organization of cancer societies. These were mainly for the stimulation of investigation and the dissemination of knowledge among medical men. Physiologists, chemists, biologists and physicists were attracted to the problem. Despite some advances, cancer remained "mysterious" and continued to reap a large harvest.

Just before the opening of the World War in 1914, it was the opinion of many medical leaders that the cancer problem should be brought into the open. Previous efforts had resulted in failure, due to inertia, apathy, or misunderstanding. In general the surgeons continued to look upon cancer as being a "surgical disease". The radiologist found that in the Roentgen ray and in radium he possessed agents which were apparently beneficial to many cancer patients, even when the lesions were in the inoperable stage. The men working in the basic sciences were out of touch with the clinical problems.

Those affected with cancer frequently concealed its presence and often sought medical consultation only as a last resort. Those that presented themselves early in the course of the disease sometimes fell into the hands of the pessimistic or ignorant physician who often did more harm than good. Thus, the patient felt that he was condemned to inevitable death and knew of no higher medical court of appeal.

The period following the World War seemed opportune for the concentration of all available knowledge on the cancer problem. The mortality and morbidity associated with other major diseases, such as tuberculosis and syphilis, had been decreased by similar concerted attacks. If one could only get the patient to see the physician during the early stage of the disease and have the latter refer the case to a group of competently and variously trained

men, it seemed possible, to thoughtful persons, that inroads might be made upon the scourge.

FRANCE

In 1842, the Association of the Ladies of Calvary was organized in Lyons for the purpose of giving comfort and shelter to women suffering from incurable cancer. This was followed by the establishment of similar institutions in other important French cities.

In 1908, The French Association for the Study of Cancer was formed to further research, to organize laboratories and hospitals, and to award prizes to meritorious authors. Ten years later (1918) the Franco-Anglo-American League for the Control of Cancer was created to interest the public in the cancer problem, and to provide better facilities for the care of patients.

In 1919, the celebrated Radium Institute began its work as a part of the Pasteur Institute, and in 1921 the City Council of Paris created services of radium therapy in several of the municipal hospitals. In the same year the Department of the Seine established a cancer center at Villejuif on the outskirts of Paris. These city and provincial projects have flourished and at present are functioning admirably.

Thus, step by step, the French nation had advanced to such a point that in 1922, under the direction of the Minister of Public Health, the French Government approved the organization of cancer centers throughout the country, and voted a credit of money to support them. These were not to be devoted to the comfort of the incurable, but were for patients who could be expected to derive benefits from active treatment. Each provincial assembly was urged to give support to the center within its jurisdiction. National and local medical societies (many of whom had sponsored the bill) were apprised of the movement, and their cooperation was solicited.

In establishing these cancer centers, the idea was to organize a select group of medical men capable of assuming the responsibility for diagnosis, application of proper therapy, and the furtherance of investigation. It was maintained that the training of physicians and medical students was of vital importance, and, despite opposition, the official centers were placed only in medical schools. The formation of other centers was not prohibited, but their financial

support by the national government was withheld. The directorship of a center was given to the person who seemed best fitted for the position, regardless of whether he was a surgeon, radiologist, internist or pathologist. The representatives of the medical profession were to cooperate closely with a physicist and were to form a nucleus about which the organization could be effected. Each (surgeon, pathologist, radiologist, or internist) was to be supreme in his own field even though one of them should be the director of the enterprise as a whole.

The government placed Roentgen ray equipment and radium in each center. It informed the people of the organization of regional cancer centers for their benefit, spread the knowledge of the early signs and symptoms of cancer, and welded the laity into an integral part of the struggle against the ravages of the scourge. The elected authorities, under the supervision of the Minister of Public Health, were made responsible for carrying these messages to the people. The physicians at the centers were informed of their duty to carry on investigation, treatment of patients, and instruction of medical students.

The selection of the personnel and the provision of a physical plant were left to each faculty of medicine. The installation of certain equipment and the conduct of a yearly inspection were reserved as state functions.

The directors of the various centers were brought together from time to time for the purpose of elucidating general problems and of maintaining a common point of view.

The results have been gratifying, and France may well point with justifiable pride to the energy, thought, and money that she has expended to combat cancer.

BELGIUM

In 1924 Belgium adopted the French system, but modified it to fit her own particular requirements. Belgium now produces ninety-five per cent of the world's annual radium output. By virtue of this good fortune her great mining concern, L'Union Minière du Haut Katanga, was able, for a very small yearly rental, to place about two grams of radium in each of the five centers. It was stipulated that approximately one-eighth must be de-

voted to research and the remainder used in the treatment of patients.

Each of Belgium's four medical schools has an official cancer center, and a fifth is connected with the Brussels Surgical and Radiological Institute, which is the outgrowth of the former Red Cross Cancer Center. It has been the radio-therapeutic pioneer in Belgium, and its personnel commands the highest respect.

In order to obtain assistance from the national government each center was compelled to have as a minimum:—a complete surgical service, a thoroughly equipped radiological department, and a highly organized laboratory for both investigative and routine work. Each year, on the first of October, the directorate of the center had to submit the following:—an account of all the receipts and the expenses for the past twelve months, an estimation of the same for the ensuing year, and a report giving the activities of the center and the results obtained during the past year. The officials of the cancer center had to submit to a yearly inspection of the physical plant by the government, but the methods of treatment and the lines of investigation pursued were not subject to interference.

The municipal councils arranged for the utilization of the resources already existing in the public hospitals. The provincial assemblies voted credits of money. The various forms of government (local, provincial, and national) united in the task of fully acquainting the people and the physicians concerning the regional cancer centers, and it was urged that these institutions be given full patronage.

The universities were held responsible for the appointment of the directorate, the selection of important personnel, and the acquisition of an ample physical plant(including the site, bed space, laboratories, etc.). A surgeon, pathologist, radiologist, physicist, and an internist were to form the nucleus of the organization. Chemists, investigators in pertinent fields, and clinicians in the assorted surgical specialties were invited to cooperate.

The official medical societies, and the profession at large, were asked to give whole-hearted support to the movement. Small diagnostic clinics in various parts of the country were maintained by local support. From these, patients were sent directly to the cancer center for diagnostic confirmation, treatment, and study. These small

auxilliary organizations were to look after the patients upon their return from the cancer center. In addition to these, the cases were followed by nursing associations, organized charities, the Red Cross, departments of public health, and, in some instances, by agents of the League Against Cancer.

This last named organization, somewhat similar in purpose to the American Society for the Control of Cancer, has been very active and prompt in giving needed support and advice.

The "Providentia", an insurance company, has added one interesting feature to the Belgian "struggle against cancer" (*la lutte contre le cancer*). For a small annual sum this company has had its insured members examined at various intervals, and those who have become afflicted with cancer have been allowed to select their own physician and hospital, the charges being paid by the "Providentia".

There are two university cancer institutes in Belgium which are now well developed, and which adequately illustrate different ideas as to the organization of such a center.

The one attached to the University of Louvain is unique in certain respects. It is completely centralized in its director. The present incumbent is also the professor of pathology. He possesses a wealth of experience in investigative work, knows thoroughly the field of therapeutic radiation, and is a good clinician. Each department in the cancer institute is completely controlled by the director, but in each (roentgenology, radium, pathology, research, hospital, etc.) he has placed a carefully chosen assistant who has immediate supervision over his own sphere of activity. The cancer unit has absolute independence. There is one surgeon who performs the major operations. He is under the director but decides the type and extent of surgical intervention. The new medical school of the University of Louvain is being built around the cancer institute, which also includes pathology. This illustrates the great importance attached to the center.

Perhaps such centralization of direction is dangerous, but on the other hand it is very efficient. At present the sanity of purpose, spirit of work, and application of knowledge are of the highest order. The State and the University retain supreme power, but it is to be hoped that they continue fortunate in the choice of future directors

rather than to decentralize an organization which is doing such magnificent work.

The University of Brussels utilizes a different method. There, the professors of surgery, of pathology, and of radiology form a triumvirate which heads the official cancer center allotted to the university and whose plant is a part of the municipal hospital. Individually, each of these three chiefs directs his portion of the work. Collectively, they decide the general policies and manage the institute as a whole. Even though a patient receives treatment in the cancer center, he remains under the complete charge of the head of the hospital service from which he is temporarily transferred. Thus a woman suffering from a cancer of the cervix uteri may enter the hospital department of gynecology, whereupon she remains subject to the orders of the gynecologist even while she is in the cancer center undergoing treatment. As a rule, however, the patients transferred to the cancer center are voluntarily placed under the charge of the directorate of the center by the consent of the transferring service. On the other hand, if the patient is admitted directly to the cancer center, *i.e.*, without going through one of the hospital services, she is under the sole direction of the cancer center authorities. Briefly then, the idea of the cancer center of the University of Brussels is one of cooperation between departmental chiefs rather than the selection of one person to take complete charge.

One plan (the University of Louvain) emphasizes the efficiency that may be gained from a one-man leadership, while the other arrangement (the University of Brussels) stresses the benefits that may be received from a three-head directorship.

ENGLAND

The English people are characteristically conservative. The same trait has been a time-honored virtue of the medical profession throughout the world. Innovations are not quickly accepted. As a rule, the English medical leaders have maintained their interest in the cancer problem from the standpoint of surgery, pathology, and investigation along certain lines, but until recently have been content to await developments in the newer field of radiation therapy.

Despite such an attitude on the part of many prominent physicians, some institutions became outstanding for the thought and

work which they devoted to the cancer problem. Of these, perhaps the two best known are The Cancer Hospital (Free) and the Department of Cancer of the Middlesex Hospital, both situated in London. They have been pioneers and have kept abreast of the times. The Cancer Hospital has the word "Cancer" placed in large letters on the front of its building. This is consistent with the policy of combating the secretiveness with which most people desire to surround the disease, only to have this ineffective cloak snatched away during the late stages when curative, and even palliative, measures may be out of the question.

The Royal College of Surgeons and the Royal College of Physicians created the Imperial Cancer Research Fund about 1900. It was dedicated principally to laboratory experimental work, and has maintained the world-famed Imperial Cancer Research Institute.

By 1921, the favorable reports coming from abroad (especially from France, Belgium, and Sweden) had accumulated to such a point that the English medical authorities selected workers to check the efficacy of the Roentgen ray and radium in the treatment of certain types of neoplasm. This investigation was carried on under the auspices of the Medical Research Council which had been organized in 1915 as a part of the King's Privy Council. It has had no connection with the Minister of Health, whose work on the cancer problem since 1922 has consisted chiefly in collecting statistical data on the mortality rate. In addition to the above, there have been unofficial observers who journeyed to the continental centers and upon their return either evolved new methods or instituted those that they had seen.

In 1923, the British Empire Cancer Campaign considerably augmented existing funds and stimulated great interest. The efforts of the private organization behind this movement were directed primarily to the coordination of investigative work and secondarily to the instruction of the public. It has consistently maintained this policy.

In 1924, the London Association of the Medical Women's Federation appointed a Cancer Research Committee to review the literature on "The Present Position of Radiotherapy in Cancer of the Uterus" and to begin the treatment of uterine malignancy with 300 mgms. of radium bromide obtained from the Medical Research

Council, which had received the precious substance from the British Empire Cancer Campaign. In their published report in 1926 the appointed committee confirmed the beneficial effects of radium therapy in patients afflicted with cancer of the cervix uteri and made a report of the pertinent literature.

In 1928, the illness of King George V. terminated in a happy recovery. Throughout the United Kingdom and the Dominions thanksgiving offerings were tendered. From the huge sums of money thus collected a large amount was utilized for the purchase of radium. This was allocated to different institutions and organizations having an interest in the radium therapy of cancer, and possessing the proper facilities (other than the radium) for carrying on the work. In addition to the augmentation of existing projects, such powerful stimuli applied to the solution of the cancer problem resulted in a marked reaction away from the previous inertia which had existed in most quarters. Special cancer departments were rapidly created and manned in some of the oldest English hospitals. Specific gifts were sought, and, when obtained, notices were prominently placed in the newspapers.

Thus by 1929 one could not avoid being impressed with the great activity and the interest being manifested in cancer work. The laity and the medical profession were thoroughly aroused. The final impetus had been given by the International Conference on Cancer which had been held in London during the previous year. The many purchases of large quantities of radium had gone on incessantly. The great, but uncoordinated, forces which had studied and labored with the problem for some years were beginning to have effect. The idea of State control was being avoided, or not thought of.

It remains to be seen whether powerful agencies having no common central direction can solve the baffling problem, or if the English will eventually resort to the principle of government control, as in France and Belgium. The answer may be important to the people of the United States, for we ordinarily prefer to attack our medical problems without assistance or supervision from the representatives of the electorate.

GERMANY

The most important agency in Germany for combating cancer has been The German Central Committee for the Study and Control of Cancer. It was organized in 1900, and its directorate has included some of the foremost medical and lay leaders of Germany.

By means of pamphlets and lectures the Central Committee has actively instructed both the people and the physicians. Nurses and midwives have been taught so that they may inform the people of the early manifestations of cancer and have them consult a doctor as early as possible. To aid the practitioner, there has been made available a free service for the diagnosis of tumor specimens.

Another important movement in Germany has been the founding of cancer institutes. They have usually arisen through the endeavors of one man, or a closely associated group, and have been attached to universities. Among the better known have been those in Heidelberg, Berlin and Hamburg. The first two have had bed space in addition to non-clinical departments. The one in Hamburg has been reserved wholly for research, and assumes no responsibility for the care of the sick. Generally speaking, throughout Germany the preferential treatment of cancer sufferers in special institutes or departments has not met with approval. The old contention that the augmentation of the fears of the patient by being in such a place would more than offset the good effects obtained through the special knowledge of the medical staff has been given great support.

The history of the institutes has been varied, usually depending upon the leader and the times. To carry out long-continued programs has been difficult. Not infrequently more support has come from lay circles than from the organized medical ones. The major financial burden has been borne by patients who carry health insurance funds.

In Germany supplies of radium are very meager as compared to those of the other nations here mentioned. This is no doubt due principally to the lack of funds which has been quite evident since the war. To offset this in some measure the Berlin Institute, for one, has made excellent therapeutic use of mesothorium. Since it can be manufactured in Germany, the Roentgen ray equipment is comparatively adequate.

Government participation has been limited to the placing of representatives on the German Central Committee for the Study and Control of Cancer, and to appropriating very small, and entirely insufficient, amounts of money. Concerted national or state action has been lacking. However, within the past two years there has been more interest manifested, and a special committee under the auspices of the Reichstag is working on the formulation of a plan for cancer organization and upon the means of securing and allocating radium. This bids fair to produce results and to place Germany upon a more favorable footing as regards the cancer problem. In research work Germany has kept abreast of the times, but in the effective application of knowledge to patients, she has lagged far behind.

SWEDEN

Sweden has made tremendous strides in its program of caring for cancer patients and in perfecting the details of requisite organizations. Until recently this remarkable progress has been centered almost wholly about the Radiumhemmet in Stockholm. In order to understand the situation which exists today in Sweden it is necessary to depict the development of this particular cancer center.

The Radiumhemmet was founded in 1910 by the professor of surgery of the local medical school. The physician in immediate charge was a roentgenologist. It began with 16 beds, and during the first year it had 159 in-patients and 173 out-patients.

In 1911, the direction of the Radiumhemmet was taken over by the Stockholm Cancer Society, and two years later (1913) it received monetary support from the city and was the recipient of a sum of money collected under the auspices of the Queen of Sweden. In 1916, the city placed an old house at the disposal of the institute for a small rental. This was remodeled and serves today as the main quarters.

In 1917, Parliament voted a sum of money for the purchase of radium, and 1918 witnessed the installation of the feature which has given to the Radiumhemmet a unique position, in that the National Government began to pay the travelling expenses of all poor patients from any part of Sweden. This feature has permitted the follow-up system to be carried out in a more thorough manner, probably, than in any other place in the world.

The State commenced, in 1920, to give a yearly sum to defray the hospital expenses of needy patients. Two years later (1922) the Queen of Sweden became the patroness of the Radiumhemmet. Through grants from the medical school, laboratories of pathology, physics and research were formed in 1924 and 1925.

A very recent step in the development of the Radiumhemmet has been to incorporate it, in an enlarged form, into the new radiological clinic of the medical school. Thus its isolation will be over, but it will be enabled to continue and to progress in a satisfactory manner, and will be even more useful by virtue of its having a closer physical connection with the medical school.

Perhaps the outstanding contribution of the Radiumhemmet has been due to its ability to follow its patients, thereby enabling it to publish statistics of great value. As necessary travelling expenses are paid, few cases are lost track of, and, if the patient is unable to journey, a written report is obtained from the local doctor. At the end of each year a list is compiled, showing the status of each patient. In so doing, procedures in the treatment of malignant tumors have been more clearly evaluated.

Another accomplishment of the Radiumhemmet has been to create an unprecedented cooperation between itself and the doctors throughout the nation. In some countries such centers have aroused the opposition of the medical profession and have thus lost one of their most valuable assets, that of good will. The Radiumhemmet has been able gradually to convince the physicians that cancer cases should be treated in centralized institutions where adequate radiological equipment (especially radium) may be available and where the doctor may see enough patients to warrant conclusions being drawn as regards methods of treatment and diagnosis.

As a result of the example set by the Radiumhemmet, a cancer center was instituted in the University of Lund in 1918, and 1922 witnessed the development of a similar one in a hospital in Gothenburg.

The Society for the Control of Cancer in Stockholm has been very active in securing publicity and support for cancer work. It has also gathered valuable statistics on the natural history of the disease, and amassed other data which would allow a truer comparison between the results secured by radiotherapy and surgery.

For the purpose of fighting cancer in Sweden and to aid in research work, the King, in 1928, gave the entire sum of money which had been presented to him by the people in celebration of his seventieth birthday. This large fund will continue to stimulate the Swedish people to maintain their advanced position in this great medical problem.

An attempt has been made to intimate a few leading causes as to why cancer control has been brought so prominently into the lay and professional thought, and to state some of the salient features that are to be found in certain cancer organizations abroad.

It has been pointed out that in France, Belgium and Sweden various agents have been instrumental in laying the foundation and perfecting cancer organizations, the State and the medical schools having jointly become the most important influences. Various institutions have developed along different lines, usually following that seemingly best fitted to solve its own particular problem. Thus, they may vary from the most centralized sort of authority to that of a loosely connected association of various interested parties, both lay and professional. Each scheme presents some unique features.

In Germany the research work has been more advanced than has the actual care of the patients. The old idea of cancer being a hopeless disease with which nothing could be done, as well as the lack of funds, has greatly hindered German progress. In view of recent interest manifested by the national government it may be predicted that Germany will eventually place herself in a position compatible with her recognized eminence in science and medicine as a whole.

England inaugurated her cancer control programs somewhat late and has preferred where possible not to have governmental agencies involved in them. During the past few years she has made tremendous strides and is rapidly drawing alongside of those nations which had gained a large lead on her.

No detailed mention has been made of the technic of equipment and treatment, since they are outside of the scope and design of this communication, but attention may be drawn to the fact that

each nation discussed above has, as one of its most important bulwarks against ignorance and its most effective medium for the dissemination of knowledge, one or more journals devoted to cancer work.

It is manifestly difficult to draw conclusions, because each local situation creates its own exigencies, and also because no plan has been in operation sufficiently long to prove that it is the best.

One might say that the following are necessary: (1) an adequate physical plant and equipment, usually resulting in definite centers or departments; (2) a campaign of education among the laity and the medical profession; (3) a competent staff directed by one person, but composed of a proficient surgeon, radiologist, and pathologist, about whom should be gathered a cooperative, interested, and capable personnel.

The attitude of hopelessness must be abandoned by physicians and be replaced with reliable information; an optimistic, constructive effort for progress must supplant a pessimistic, destructive passivity. No giving-up should be countenanced; investigation should proceed along all lines. The dissemination of knowledge and the fostering of good-will among the physicians and the people should be one prime objective of any cancer center.

The observations upon which this article is based were made during 1929 while the author was a Traveling Fellow under the joint auspices of the Memorial Hospital, New York City, and the Commission of Relief in Belgium Educational Foundation, Inc., and in 1930 while a member of the Yale University School of Medicine. Some information has been derived from the literature, but for the most part the impressions have been formed from personal observations and conversations.